

In the Claims

Please replace all prior versions, and listings, of claims in the application with the following list of claims, in which insertions are indicated by underlining and deletions are indicated by strikeouts or double bracketing.

1.-17. (Canceled)

18. (Currently amended) A ~~fragment of an immunoglobulin that specifically binds an antigen of interest, wherein said fragment consists essentially of~~ a variable region of a heavy polypeptide chain that specifically binds an antigen of interest, said variable region being devoid of normal light chain interaction sites.

19. (Currently amended) A ~~fragment of an immunoglobulin that specifically binds an antigen of interest, wherein said fragment consists essentially of part of the~~ a variable region of a heavy polypeptide chain that specifically binds an antigen of interest, said variable region being devoid of normal light chain interaction sites.

20.-21. (Canceled)

22. (Currently amended) A polypeptide comprising a variable region of a heavy polypeptide chain ~~fragment of an immunoglobulin~~ according to claim 18 or a fragment according to claim 19, ~~which has~~ recombinantly fused to a constant region which is devoid of a CH1 domain.

23. (Withdrawn and currently amended) A variable region of a heavy polypeptide chain ~~fragment of an immunoglobulin~~ according to claim 18 which is combined with a fragment of a four-chain immunoglobulin.

24. (Withdrawn and currently amended) A fragment of a variable region ~~an immunoglobulin~~ according to claim 19, which is combined with a fragment of a four-chain immunoglobulin.

25. (Currently amended) A variable region of a heavy polypeptide chain ~~fragment of an immunoglobulin~~ according to claim 18, which is expressed in a prokaryotic or in a eukaryotic host cell.
26. (Currently amended) A fragment of a variable region ~~an immunoglobulin~~ according to claim 19, which is expressed in a prokaryotic or in a eukaryotic host cell.
27. (Currently amended) A polypeptide ~~fragment of an immunoglobulin~~ according to claim 22 ~~[[21]]~~, which is expressed in a prokaryotic or in a eukaryotic host cell.
28. (Withdrawn and currently amended) A fragment of a variable region ~~an immunoglobulin~~ according to claim 19, which comprises at least 10 amino acid residues of the variable region of a heavy polypeptide chain and comprises the residue corresponding to position 45 in the immunoglobulin, said residue at position 45 being a charged amino acid residue or a cysteine residue.
29. (Withdrawn and currently amended) A fragment of a variable region ~~an immunoglobulin~~ according to claim 28, which is combined with a fragment of a four-chain immunoglobulin.
30. (Withdrawn and currently amended) A modified 4-chain immunoglobulin or a fragment thereof comprising a variable VH region which is modified such that the VH region has been partially replaced by specific sequences or amino acid residues of a fragment of a variable region ~~an immunoglobulin~~ according to claim 19.
31. (Currently amended) A variable region of a heavy polypeptide chain ~~fragment of an immunoglobulin~~ according to claim 18 or a fragment of a variable region according to claim 19, wherein the variable region ~~immunoglobulin~~ or fragment is suitable for use in in vitro diagnosis.
32. (Currently amended) A variable region of a heavy polypeptide chain ~~fragment of an immunoglobulin~~ according to claim 18 or a fragment of a variable region according to claim 19, wherein the variable region ~~immunoglobulin~~ or fragment is suitable for use in in vivo diagnosis.

33. (Currently amended) A variable region of a heavy polypeptide chain ~~fragment of an immunoglobulin~~ according to claim 18 or a fragment of a variable region according to claim 19, which is labeled with a detectable label.

34. (Withdrawn and currently amended) A variable region or fragment of an ~~immunoglobulin~~ according to claim 33, wherein the detectable label is an imaging agent.

35. (Currently amended) A variable region or fragment of an immunoglobulin according to claim 33, wherein the detectable label is selected from the group consisting of a radioisotope, a chemical marker, an enzymatic marker, or a chemiluminescent marker.

36. (Withdrawn and currently amended) A variable region of a heavy polypeptide chain ~~fragment of an immunoglobulin~~ according to claim 18 or a fragment of a variable region according to claim 19, which is directed against an immunoglobulin idiotype.

37.-50. (Canceled)

51. (Currently amended) A composition comprising a variable region of a heavy polypeptide chain ~~fragment of an immunoglobulin~~ that specifically binds to an antigen of interest, ~~wherein said fragment consists essentially of a variable region of a heavy polypeptide chain~~, said variable region being devoid of normal light chain interaction sites.

52. (Currently amended) A composition comprising a fragment of a variable region an ~~immunoglobulin~~ that specifically binds to an antigen of interest, ~~wherein said fragment consists essentially of part of the variable region of a heavy polypeptide chain~~, said variable region being devoid of normal light chain interaction sites.

53. (Currently amended) The composition according to claim 51 or 52, wherein the variable region or the fragment specifically binds a protein, hapten, carbohydrate or nucleic acid.

54. (Currently amended) The composition according to claim 51 or 52, wherein the variable region or the fragment specifically binds a protein present on tumor cells.

55. (Withdrawn and currently amended) The composition according to claim 51 or 52, wherein the variable region or the fragment is combined with a toxin, enzyme, drug, hormone, or cytokine.

56. (Withdrawn) The composition according to claim 54, wherein the toxin is mistletoe lectin toxin.

57.-58. (Canceled)

59. (Withdrawn and currently amended) The composition according to claim 51 or 52 [[58]], wherein the variable region or the fragment is capable of targeting drugs, hormones or cytokines to cells.

60.-63. (Canceled)

64. (Withdrawn and currently amended) A method for synthesizing a polypeptide fragment of an immunoglobulin according to ~~any of claims 18-~~ claim 22 comprising (a) selecting a variable region or a fragment having a determined antigen specificity; and (b) recombinantly fusing attaching the variable region or the fragment of step (a) to a constant region.

65. (Withdrawn and currently amended) A method according to claim 64, ~~wherein attaching of the variable region to the constant region in step (b) is effected by~~ further comprising expressing the polypeptide fragment as a fusion polypeptide.

66. (Withdrawn and currently amended) A nucleic acid molecule encoding ~~an fragment a~~ variable region according to ~~any of claims~~ claim 18 [[-]] or a polypeptide according to claim 22.

67. (Withdrawn) A vector comprising nucleic acid according to claim 66.

68. (Withdrawn) A host cell transfected with a vector according to claim 67.

69. (Withdrawn and currently amended) A method of treating and/or preventing disease in a patient, wherein the method comprises administering to the patient a therapeutically effective amount of ~~an fragment~~ a variable region according to ~~any of claims~~ claim 18[[-]] or a polypeptide according to claim 22.